## CLAIMS

- 1. A glucose sensor comprising: an electrically insulating base plate; an electrode system including at least a working electrode and a counter electrode formed on said base plate; and a reaction layer containing at least pyrrolo-quinoline quinone dependent glucose dehydrogenase, formed in contact with or in the vicinity of said electrode system, wherein said reaction layer contains at least one kind of additive selected from the group consisting of gluconic acid and salts thereof.
- 2. The glucose sensor as set forth in claim 1, wherein said reaction layer further contains at least one kind of additive selected from the group consisting of phthalic acid, salts of phthalic acid, maleic acid, salts of maleic acid, succinic acid and salts of succinic acid.
- 3. The glucose sensor as set forth in claim 1 er 2, wherein said reaction layer further contains calcium ions.
- 4. The glucose sensor as set forth in any one of claims I through 3, wherein said salt of gluconic acid is potassium gluconate, sodium gluconate, calcium gluconate, cobalt gluconate, or copper gluconate.

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5. The glucose sensor as set forth in any one of claims 1 through 4, wherein said reaction layer further contains an electron mediator.

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